

Abstract

The present invention provides a semiconductor acceleration sensor wherein a semiconductor element is prevented from being damaged even when at least part of a weight is disposed in an internal space of a semiconductor sensor element and the mass of a weight is accordingly increased. An inner peripheral surface of a support portion 9 is constituted by four trapezoidal inclined surfaces 13 of a substantially identical shape which are annularly combined so as to define an outer peripheral surface of a frust-pyramidal space. A weight 3 is so constructed as to have an abutting portion including a linear portion 3d which abuts against the inclined surfaces 13 constituting the inner peripheral surface of the support portion 9 when the weight 3 makes a maximum displacement in a direction where a diaphragm portion 11 is located. The abutting portion 3d has a circular outline shape as seen from a side where a weight fixing portion 7 is located. A stopper structure is constituted by the inclined surfaces 13 and the abutting portion 3d of the weight 3, for restricting a displacement range of the weight 3 in the direction where the diaphragm portion 11 is located.